

Vantopia Kit Installation Instructions

Model: Mercedes Sprinter 144/170 High Roof
(Revised 6-21-25)

Step 1 - Vehicle Prep

Instructional Video -> [Youtube Video](#)

1 person minimum

1. Tools Required
 - a. T45 Torx bit
 - b. Impact wrench (Recommended for older vans)
 - c. Ratchet (Recommended for newer vans without rust)
 - d. Anti-seize (Recommended for older vans with rust)
 - e. 10mm socket wrench
 - f. Safety glasses
2. Procedure
 - a. Remove electrical conduit covering wire harness
 - i. Pull hard on the plastic channel until anchors release
 - b. Discard channel pieces and anchors
 - c. Remove and seat belt anchors in walls
 - d. Remove any factory-installed lighting on walls or ceilings. Doors can keep any installed lights.
 - e. Sweep out the floor area and check for any modifications or damage
3. Tips and tricks
 - a. Check to see that tap easily threads into wall mounting holes used for floor bolts
 - i. If easy no need to tap and add anti-seize

Step 2 - Vent Install

[Youtube Video](#)

2 person minimum

Warning: This step requires the use of a ladder and climbing onto the roof of a van.

Having a second set of hands to help stabilize a ladder and assist is strongly advised.

Warning: Safety glasses are critical for this step as there are chips of metal produced. You do not want a chip of metal in your eye.

- a. Tools
 - i. Hammer
 - ii. Drill
 - iii. Step bit up to 1"

- iv. Center punch
- v. Measuring tape
- vi. Saw for metal - jig saw or sawzall
- vii. Metal cutting blade for saw
- viii. Caulking gun
- ix. Safety glasses
- x. Gloves
- b. Hardware
 - i. Vent template - Supplied by
 - ii. Max air vent or equivalent - supplied by the customer
 - iii. Butyl tape or equivalent - supplied by the customer
 - iv. Sikaflex or equivalent - supplied by the customer
 - v. Rustoleum paint or equivalent - supplied by the customer
- c. Procedure
 - i. Measure hole center point using tape measure
 - 1. Find the centerline of vehicle by measuring between fixed points(find two screw holes that are symmetric across centerline of vehicle)
 - 2. Place template and confirm no interference with van ribs or structural members
 - 3. Once template is centered and parallel to van ribs mark center hole with marker
 - 4. Drill this hole using step bit
 - a. Use center punch to mark center point of mark
 - 5. Once hole is drill move to the top of vehicle and align template with newly created hole
 - a. Make sure template is parallel to known rib
 - 6. Mark corners of vent template with marker
 - 7. Drill these 4 points with step bit
 - a. Make sure to place bit inside the square not on the exact corner
 - 8. Use jig saw to cut the lines btw the 4 holes just drilled
 - 9. Place vent in newly created square hole
 - a. Check for fit and any interference
 - b. If interference use jig saw to cut away
 - 10. Use butyl tape to build up flat bed area under vent
 - a. Bring up to the height of the ribs or and protruding elements
 - 11. Apply Sikaflex or equivalent to this bedding
 - a. Similar to putting icing on a cake
 - b. Use liberal amount of sealant (up to 1.5 tubes per vent is acceptable)
 - 12. Place vent on bedding with sealant

- a. Make sure vent is oriented properly and wires aren't trapped in sealant/bedding
 - b. Screw the provided screws around the perimeter using drill with Philips bit
 - c. Screw it until sealant appears to squeeze out from under the rim
 - 13. Apply another layer of sealant around perimeter
 - 14. Apply dabs of sealant to each fastener
 - a. Add about as much volume as a Hershey Kiss chocolate per fastener (It may seem like a lot but its common practice)
 - d. Tips and tricks
 - i. make sure to check orientation of vent before installing
 - 1. Vent hinge should be on the front side
- Make sure not to get wire pinched or caught in vent rim while installing

Step 3 - Insulation

[Youtube Video](#)

1 person minimum

Warning: Gloves, safety glasses, and N95 mask are recommended to reduce contact with spray adhesive.

- a. Tools
 - i. Scissors high quality
 - ii. Safety glasses
 - iii. N95 mask
 - iv. Nitrite gloves (recommended)
- b. Hardware
 - i. Spray Adhesive - supplied by the customer
 - ii. 3M Thinsulate Insulation or equivalent - supplied by the customer
 - iii. Covering for seats - supplied by the customer
- c. Procedure
 - i. Cover up front seats with trash bags or purpose made covers
 - ii. Cut pieces of insulation to fit main exposed metal panels of van
 - 1. Make sure not to place insulation on high point where rails and panels attach
 - iii. Spray adhesive on insulation and then place in final location
 - 1. Check to see that its attached before attacking away support
 - iv. Add chucks/scraps of insulation to any cavity spaces that are accessible
- d. Tips and tricks
 - i. Use a piece of scrap cardboard to catch overspray

Step 4 - Sanding kit components

[Youtube Video](#)

1 person minimum

2 recommended

Warning: N95 mask, safety glasses, and gloves are required.

- a. Tools
 - i. Random Orbit sander - From parts list
 - ii. Spindle sander - Optional, not required
 - iii. Oscillating Tool - From tools section of parts list
- b. Hardware
 - i. Sanding pads - From tools section of parts list. 400 grit recommended
 - ii. Large Cardboard pad or equivalent -
- c. Tips and tricks
 - i. Get a helper to assist moving the frames to avoid cracking
 - ii. Save frames until completely finished with sanding/assembly

Confirm you have all the necessary parts

Step 5 - Floor Assembly

[Youtube Video](#)

[Floor Trim Install](#)

2 people recommended

Warning: Floor sheets are heavy and are a hazard if they fall on toes or other body parts. Be careful when handling and be careful where you lean or place floor sections.

Tools

- a. T30 Torx bit
- b. 5mm Allen key
- c. Hammer
- d. Chamfer bit
- e. 3/16 drill bit
- f. Center punch - optional
- g. Measuring tape
- h. Saw for metal - hacksaw or power saw optional
- i. Wood glue - optional but recommended
- j. Brush and tray - optional but help with glue application.
- k. Safety glasses
- l. Gloves

Hardware

- a. **Bag 50/Bag 18** M8 by 45mm flanged bolts
<https://www.mcmaster.com/97654A232/>
- b. **Bag 22** Steel Round base weld nut with ¼-20 Screws
<https://www.mcmaster.com/90563A620/>
- c. **Bag 5** Washer fender .375" by 1.5" <https://www.mcmaster.com/90313A115/>
- d. **Bag 27** Zinc plated steel insert for wood <https://www.mcmaster.com/98965A410/>
- e. **Item 39** Main Floor sections Foam insulation by vantopia

- f. **Bag 64** Noise reduction flocking tape, felt dots, and thread locker
- g. **Item 30** Smooth threshold <https://www.mcmaster.com/8422A21/>
- h. **Item 32** 1.5" by .125" Flatbar
- i. **Item 31** Aluminum Angle 1" by 1" by .0625"

Procedure:

1. Pre assembly/staging of floor sections
 - a. Place floor sections **Item 38** upside down on clean floor
 1. Place cardboard beneath
 - b. Hammer in Zinc plated steel inserts **Bag 27**
 1. These fasteners are placed in all holes besides the puzzle fit hole joint
 - c. Attach the mating sections together with puzzle interlocks
 - d. Place **Bag 5** washers and **Bag 22** weld nuts on puzzle fit holes
 1. Use lightweight hammer to carefully tap the weld nut into hole while capturing the washer(don't overdo it with the hammer just enough to seat the weld nut)
 2. Will be a pretty tight fit so don't force it, make sure it is properly aligned if resistance is encountered.
 - e. Once all fasteners are in have helper assist in flipping the floor
 - f. Once flipped secure ¼-20 fasteners from **Bag 22** into the puzzle fit holes
 1. This will level out the floor joint
 - g. Repeat same procedure to the other pair of floor panels
2. Mounting of pre staged floor sections in van
 - a. Place **Item 39** foam floor insulation in place
 - i. Start with piece closest to the cab of the van
 - ii. Be careful not to tear the puzzle joints or mishandle
 - b. With a helper move the forward floor assembly into place inside van
 - i. Place driverside edge down first close to wall of van(note: the assembled pair of floors will be delicate in this state, please handle with care)
 - ii. Carefully lower the floor assembly down until flush with floor
 - iii. Repeat this process with the rear floor assembly
 - c. Position floor assemblies so that mounting holes are exposed through mounting holes
 - i. This make take some shifting to accomplish
 - d. Mount floor using **Bag 50/Bag 18** M8 by 45mm flanged head bolts and **Bag 5** 1.5" washers
 - i. Existing hardware is no longer needed, just place the washer on mounting points counterbored into the floor section and insert flanged head bolt to engage factory threaded hole below
 - ii. If resistance is encountered use the provided anti seize in **Bag 64**
 - e. Mounting mid strip flat bar
 - i. Place **Item 32** flat bar between both floor assemblies
 1. If oversized measure length and cut flat bar to appropriate length

- ii. Predrill 10 screw holes for **Bag 14**
 - 1. Start from center outward and mark holes evenly every 12 inches from centerline of vehicle/flatbar
 - 2. Create 2 row of screw holes, one row to engage each floor section at parting line
 - 3. Chamfer holes using appropriate chamfer bit for screw head size
 - 4. Mount flat bar using **Bag 14** screws
- f. Mounting 1" Angle extrusions **Item 31**
 - i. Use similar technique as described in above section "e"
 - 1. First check fit and cutdown length if necessary
 - 2. Measure from centerline outward for rear angle trim piece and front to back for sliding door opening angle trim piece
 - 3. These trim pieces only require a single row of screws
- g. Mounting Smooth Threshold **Item 30**
 - i. Use similar technique described in above section "f"
 - ii. This part requires no predrilling
 - iii. Use supplied screws to mount in pre existing holes
 - iv. If threshold is slightly oversized, measure excess and cut down

Step 6 - Rail hanger clip install

[YouTube Video](#)

1 person minimum

Tools

- a. 4mm Allen Key
 - i. Drill optional

Hardware

- 1. **Bag 49** Special Mercedes Oval hole brackets
- 2. **Bag 20:** M8 by 45mm Flanged head bolts
- 3. **Item 34:**3060 Aluminum Rail Extrusion by 8ft predrilled by vantopia
- 4. **Item 35:**3060 Aluminum Rail Extrusion by 6ft predrilled by vantopia

Step 7 - Wall and division strip Install

[YouTube Video](#)

1 person possible

2 people recommended

Warning: Safety glasses and highly recommended. Dust from the wall panels or cut chips from the wall panel division may be hazards to your eyes.

- a. Tools
 - i. Hammer

- ii. Drill with .25" bit to remove clips
- b. Hardware
 - i. **Item 24:** Wall panel division Strips 8ft by vantopia
 - 1. Need 6 8ft pieces -
 - ii. **Bag 23:** Body Clips - by Vantopia
 - 1. Need 55 clips
 - iii. **Item 41:** Wall beadboard by vantopia
 - iv. **Bag 20:** M6 by 50mm Flanged head screws
- c. Procedure
 - i. Start by placing lower wall panels on the drivers side **Item 41**
 - 1. Use clips **Bag 23** to secure panel to wall using hammer to depress clip plungers
 - 2. Get measurements of vertical division strip **Item 24** length
 - 3. Cut vertical division strip using oscillating tool (make sure to chamfer top edge to mate against horizontal division strip)
 - a. Slide this division strip between the two bottom panels
 - 4. Measure and cut to length horizontal division strips
 - a. These strips can be straight cut no need for chamfers
 - b. Press this strip onto the top edge of the previously placed lower wall panels
 - ii. Place the rear middle wall panels **Item 41** into division strip **Item 24**
 - 1. Measure and cut to length the vertical division strip between the two middle wall panels
 - 2. Press this strip onto the side of the middle wall panel
 - iii. Place the front middle wall panel **Item 41** into horizontal division strip
 - 1. Once inserted into horizontal division strip slide the panel back towards rear middle wall panel
 - 2. Work the panel into the vertical division strip
 - a. Use a shoehorn technique using a piece of scrap division strip
 - iv. Repeat same procedure on top wall panels
 - v. Repeat same procedure on passenger side wall panels
- d. Tips and Tricks
 - i. Make sure to line up panel edges before placing all body clips
- e. The panels can be slipped forward or backwards as needed

Step 8 Header Install

[YouTube Video](#)

1 person possible

2 people highly recommended

Tools

- a. 7/16 open-end wrench
- b. 5mm Allen key
- c. T30 Torx bit

Hardware

- d. **Bag 1** M6 by 45mm flat head main screws
 - 1. Need 4 - 144 kit
- e. **Bag 2** M6 Rectangle nuts by Vantopia
 - 1. Need 4 - 144 kit
- f. **Bag 27** Zinc plated steel insert for wood <https://www.mcmaster.com/98965A410/>
- g. **Bag 17** M8 by 35mm Button head bolts <https://www.mcmaster.com/92095A292/>
 - 1. Need 3 - 144 kit
- h. **Bag 48** Toggle bolts with washer/nut <https://www.mcmaster.com/94040A110/>
 - 1. Need 2 - 144 kit

Step 9 Kit Assembly

[General Instructions](#)

[Raised Bed Instructions](#)

[Dinette Bed Instructions](#)

[Window Combo Unit Instructions](#)

1 person possible

2 people recommended

Tools

- a. Drill optional
- b. T30 Torx bit
- c. Needle nose pliers
- d. Philips bits

Hardware

- e. **Bag 1** M6 by 45mm flat head screw <https://www.mcmaster.com/92125A250/>
- f. **Bag 2** M6 Rectangle screw by vantopia
- g. **Bag 3** M8 by 90mm Button head screw <https://www.mcmaster.com/92095A336/>
- h. **Bag 62** Lag bolts <https://www.mcmaster.com/92351A556/>
- i. **Bag 4** Clevis pin 45mm with E clips
- j. **Bag 5** Washer .375" by 1.5" fender <https://www.mcmaster.com/90313A115/>
- k. **Bag 6** Washer .375" by 2" fender <https://www.mcmaster.com/90313A116/>
- l. **Bag 7** Nylon spacer .375 ID .75" OD by 1.25" long
<https://www.mcmaster.com/94639A863/>
- m. **Bag 8** .375" by .875" washers <https://www.mcmaster.com/92141A031/>
- n. **Bag 9** M6 by 70mm flat head screws <https://www.mcmaster.com/92125A258/>
- o. **Bag 10** M6 by 30mm button head screws
<https://www.mcmaster.com/92095A244/>
- p. **Bag 11** M6 washers <https://www.mcmaster.com/91116A150/>
- q. **Bag 12** Wooden dowels .5" by 1.5" <https://www.mcmaster.com/97195A116/>

- r. **Bag 14** Wood Screws
- s. **Bag 15** T slot frame nut <https://www.mcmaster.com/5537T67/>

Step 10 Module Installation

[YouTube](#)

Step 11 Draft Video

[Youtube](#)

Finishing details - Bamboo faces, countertop, bamboo locks, drawers, and tray tables

Tools

- a. Drill
- b. Philips bit
- c. Needle nose pliers
- d. Bamboo oil

Hardware

- e. **Bag 25** Drawer slides 20" <https://www.mcmaster.com/2712A6/>
 - 1. Need 2 pair
- f. **Bag 12** Wooden dowels .5" by 1.5" long <https://www.mcmaster.com/97195A116/>
- g. **Bag 29** Soft close hinges by vantopia
 - 1. Need 32
- h. **Bag 4** 45mm Clevis pins with E clips
 - 1. Need 27
- i. **Bag 8** Washers .375 by .875"
 - 1. Need 200
- j. **Bag 16** M8 eye rings
 - 1. Need 4